DOCUMENT RESUME

ED 400 817 IR 018 171

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TITLE The Instructional Technology Support Center at MTSU: Integrating Technology into K-12 and University Classrooms.

PUB DATE 96

NOTE 9p.; In: Proceedings of the Mid-South Instructional Technology Conference (1st, Murfreesboro, Tennessee, March 31-April 2, 1996); see IR 018 144.

PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Audiovisual Aids; *Computer Centers; Computers; Computer Software; *Computer Uses in Education; Curriculum Development; Educational Facilities; *Educational Technology; Elementary Secondary Education; Higher Education; *Multimedia Instruction; Multimedia Materials; *Teacher Education; Video Equipment

IDENTIFIERS Middle Tennessee State University

ABSTRACT

The Instructional Technology Support Center (ITSC) provides training and support for the use of instructional technology by K-12 teachers and Middle Tennessee State University (MTSU) faculty. The goals of the ITSC include: training pre-service and in-service teachers in the use of instructional technology; improving MTSU teaching through expanded use of instructional technology; and developing multimedia curriculum for use in K-12 and MTSU classrooms. The ITSC consists of Media Services, Engineering and Technical Services, a multimedia development center, and three computer classrooms. Media Services houses an extensive multimedia library. Engineering and Technical Services provides audio-visual equipment and produces original videos. The multimedia classrooms are used for teaching courses in the teacher preparation program; for instructional technology training; and to provide access to computers for MTSU students and faculty. The paper summarizes ITSC history, administrative structure, facilities and services, and ITSC initiatives. (Author/SWC)

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ED 400 817

The Instructional Technology Support Center at MTSU: Integrating Technology into K-12 and University Classrooms

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ABSTRACT

The Instructional Technology Support Center (ITSC) provides training and support for the use of instructional technology by K-12 teachers and MTSU faculty. The ITSC consists of Media Services, Engineering and Technical Services, a multimedia development center, and three computer classrooms. Media Services houses an extensive multimedia library. Engineering and Technical Services provides audio-visual equipment and produces original videos. The multimedia development center helps faculty create multimedia projects. The computer classrooms are used for teaching courses in the teacher preparation program; for instructional technology training; and to provide access to computers for MTSU students and faculty. Recent ITSC initiatives are summarized.

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Introduction

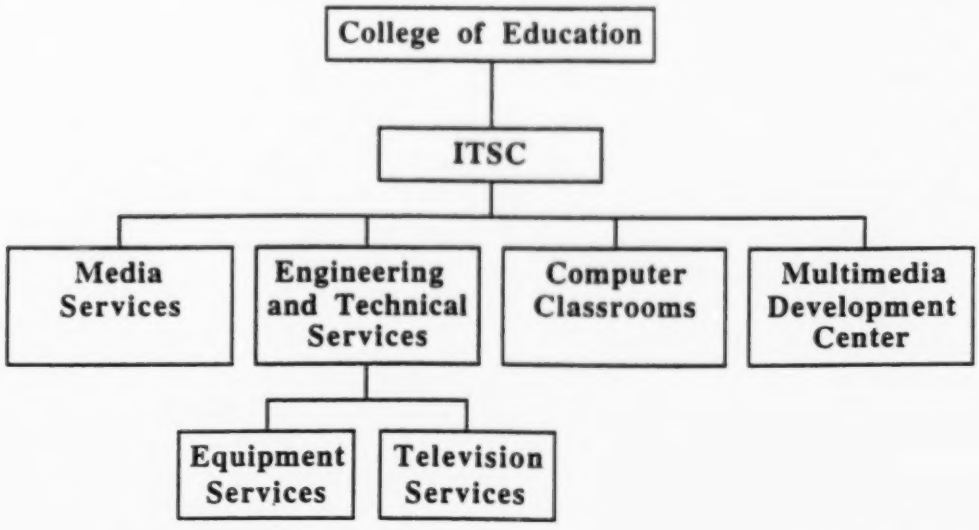
The Instructional Technology Support Center (ITSC) was established in 1994 to provide training and support for the use of instructional technology by K-12 teachers and Middle Tennessee State University (MTSU) faculty. Below, the history, administrative structure, facilities, hardware, software, goals and recent initiatives of the ITSC will be described.

History

The MTSU Learning Resource Center (LRC) was built in 1975 to support teaching and learning by using the cutting-edge instructional technology at the time - - video and television. The LRC's main objective was to provide faculty and students with a wide range of innovative and effective teaching and learning options. The Instructional Technology Support Center, located in the recently renamed Ned McWherter Learning Resources Center, was established in 1994 to provide training and support for the use of instructional technology by K-12 teachers and MTSU faculty. Instructional technology in the 1990's includes computer hardware and software, laserdiscs, CD-ROM, multimedia, Internet resources, hypermedia and other emerging technologies.

Administrative Structure

The Instructional Technology Support Center (ITSC) consists of the following units and facilities: Media Services, Engineering and Technical Services, two computer classrooms, a twenty-first century classroom, and a faculty multimedia development center. The administrative structure is represented graphically below.



Media Services

Media Services houses an extensive multimedia library, a teleconferencing classroom, and a multimedia classroom. These facilities are described below.

Learning Lab

- houses a collection of video/audio cassette tapes, 16mm films, 35mm filmstrips, laserdiscs, computer software, and CD-ROM's available for faculty loan and in-house student use
- offers a software/CD-ROM reserves service for faculty and students
- provides computers, typewriters, and various projectors to faculty and students for in-house use.

Teleconferencing Classroom

- accommodates approximately thirty participants for audiovisual viewing and/or teleconferencing.
- furnishes a video projector and projection screen, VCR and laserdisc player, various audiovisual projectors, and an electronic white board for classes or meetings.
- has a Power Macintosh 7100 with CD-ROM.
- has an LCD panel and overhead projector compatible with Macintosh & Windows platforms.

Multimedia Classroom

- theater-type classroom with large-screen projection of videos, slides, 16mm films, overhead transparencies, and television programs.
- allows instructor control of room lights, sound recordings, and projector from a console at the front.
- has a Power Macintosh 7200 with CD-ROM.
- has a data/video projector available for check-out through Equipment Services.

Engineering and Technical Services

Engineering and Technical Services consists of two sub-units: Equipment Services and Television Services. The Equipment Services sub-unit supports faculty use of audio-visual equipment by providing check-out service and repairing campus audiovisual equipment. The Television Services sub-unit helps faculty members and administrators create high-quality videos to enhance their teaching and presentations. Both sub-units are described in more detail below:

Equipment Services

The Equipment Services sub-unit supports faculty use of audio-visual equipment through the following:

- maintains an inventory of audio-visual equipment for faculty/staff check-out.
- repairs campus audiovisual equipment.
- provides dubbing services including videotape format change and limited multiple copying.
- records off-air programming for classroom use.
- supports satellite down-linking for classroom use, teleconferencing, or videotaping.

Television Services

The Television Services sub-unit helps faculty members and administrators create high-quality videos to enhance their teaching and presentations through the following professional services:

- Studio Production - - a multiple camera, broadcast-quality facility to videotape lectures, classes, talk shows and performances.
- Remote Production - - a single camera, broadcast-quality videotaping service for on- or off-campus locations such as classrooms, offices, sporting events, or conferences.
- Graphics Generation - - a method of adding words, titles, credits, transitions, and special effects to video during editing.
- Post Production - - editing footage into a cohesive video presentation.

Computer Classrooms

The computer labs and twenty-first century classroom are used for teaching technology and methods courses in the teacher preparation program; for instructional technology training; and to provide access to computers for MTSU students and faculty. All computers in the computer labs and the twenty-first Century Classroom are connected to the campus network which provides access to Internet. When classes are not in session, the computer labs are available to MTSU faculty and students for open lab hours and special programs. During open-lab times, student workers are available to provide technical assistance. The hardware and software contained in each of the computer classrooms are described in detail below.

Power Macintosh Lab

- 25 Power Macintosh 7100 computers w/ CD-ROM.
- Laserdisc player and VCR.
- 4 large-screen display monitors.
- 1 color flatbed scanner and 2 laser printers.
- software: word-processing, spreadsheet, database, presentation graphics, multimedia, authoring, and Internet applications.

Pentium Lab

- 25 Pentium computers w/ CD-ROM.
- Laserdisc player and VCR.
- 4 large-screen display monitors.
- 1 color flatbed scanner and 2 laser printers.
- software: word-processing, spreadsheet, database, presentation graphics, multimedia, authoring, and Internet applications.

Twenty-First Century Classroom

- 1 Power Macintosh 7100 teacher workstation w/ CD-ROM.
- 16 Power Macintosh 6100 AV student workstations w/ CD-ROM.
- LCD panel and overhead projector.
- 1 laser printer.
- software: word processing, presentation graphics, database, spreadsheet, and Internet applications.

Faculty Multimedia Development Center

The faculty multimedia development center provides hardware, software, and technical support for creating multimedia instructional materials for use in teaching. Faculty may sign up for 2-hour blocks of time to create multimedia presentations, hypermedia modules, and other technology-based materials for enhancing classroom instruction.

Hardware

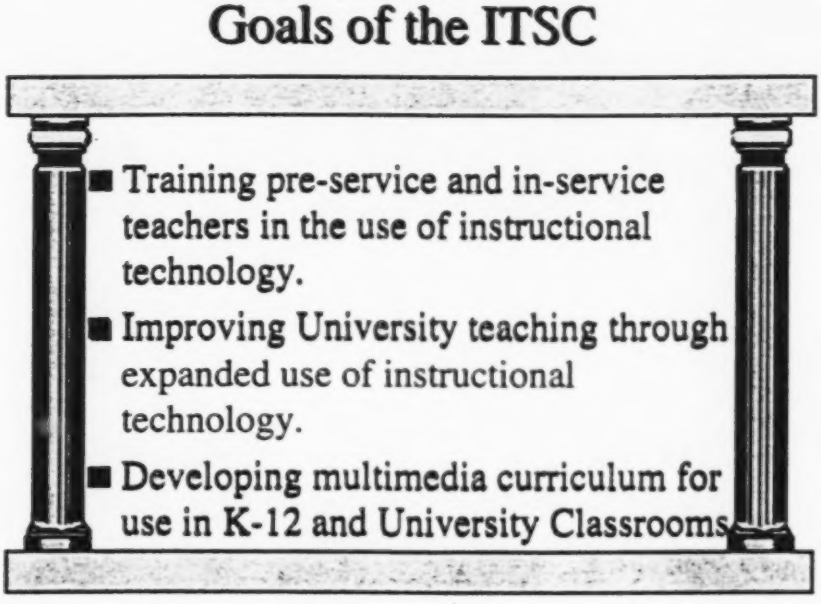
- Power Macintosh 8100 with CD-ROM.
- laserdisc player, digital VCR, and monitor.
- Pinnacle CD-recorder.
- color flatbed scanner.

Software

- productivity Software.
- presentation Graphics Programs.
- multimedia Development Programs.
- authoring Tools.

Center Goals

The Instructional Technology Support Center was established to fulfill three primary goals. These goals are summarized in the graphic below.


Goals of the ITSC
Training pre-service and in-service teachers in the use of instructional technology.
Improving University teaching through expanded use of instructional technology.
Developing multimedia curriculum for use in K-12 and University Classrooms

Recent Initiatives at the ITSC

Progress has already been made toward meeting the three primary goals of the ITSC. This progress is summarized below for each goal.

Training Pre-Service and In-Service K-12 Teachers in the Use of Instructional Technology

A primary mission of the Instructional Technology Support Center is to provide technology training and support for pre-service and in-service teachers. The ITSC cooperates extensively with the departments of Educational Leadership and

Elementary and Special Education to provide instructional technology training to students in MTSU's teacher education programs. Faculty from these departments teach technology-related courses in two computer labs (Power Macintosh lab and Pentium lab). Educational methods courses are taught in a twenty-first century classroom that is an expanded version of technology-rich classrooms found in Tennessee's public schools.

The ITSC also collaborates with the two teacher education departments, other university units, area schools, the Tennessee Board of Regents, and the Tennessee Department of Education to provide in-service training for K-12 teachers, administrators, and staff. Recent initiatives include a series of in-service workshops introducing Middle Tennessee teachers to presentation software packages, multimedia teaching tools and strategies, Internet, and student databases.

A summary of recent initiatives meeting the instructional technology needs of K-12 pre-service and in-service teachers appears below:

- educational technology courses for pre-service teachers.
- educational methods classes for pre-service teachers offered in a technology-enriched (twenty-first century) classroom.
- Internet training for K-12 teachers.
- Internet training for K-12 librarians.
- in-service technology workshops for Tennessee teachers.
- host for the annual Tennessee Technology Coordinators Conference.
- conference programs and facilities.
- week-long summer multimedia workshops for K-12 teachers.

Improving University Teaching through Expanded Use of Instructional Technology

In addition, the ITSC has assisted faculty in integrating instructional technology into University teaching. The center organizes faculty workshops, demonstrations, and training sessions relating to the use of instructional technology in the academic disciplines. For example, a faculty instructional technology institute is offered each summer. At the institute, faculty attend hands-on training workshops and share their experiences using instructional technology in the classroom.

The ITSC also participates in the Teaching, Learning, and Technology Roundtable (TLT-R) program which is sponsored by the American Association of Higher Education. The MTSU TLT-R consists of faculty and administrators committed to improving teaching and learning through selective use of new technology. The campus TLT-R program is developing a technology experts list

which will be available on-line for use by MTSU faculty. Further, the TLT-R was instrumental in establishing a new faculty award for innovative use of instructional technology in teaching.

Developing Multimedia Curriculum for Use in K-12 and University Classrooms

The ITSC has made initial progress toward meeting its third primary goal, that of developing multimedia curriculum for use in K-12 and University classrooms. The ITSC regularly offers workshops focusing on multimedia teaching tools and strategies for K-12 classrooms. Further, the ITSC and the Department of Educational Leadership are co-sponsoring a new instructional technology initiative for K-12 teachers called "M.A.S.T.E.R. I.T." (Math and Science Teachers Expanding Resources through Instructional Technology). M.A.S.T.E.R. I.T. is a week-long workshop for secondary math and science teachers focusing on the development of multimedia instructional materials. A team approach to multimedia development is adopted in the program. Teachers work with curriculum experts, MTSU faculty in their content areas, and center technical specialists to create multimedia curriculum to be used in their classrooms.

Progress has also been made in helping faculty create multimedia curriculum for use in University classrooms. The ITSC houses a multimedia development center where MTSU faculty can create multimedia lectures or presentations. The center is in the process of hiring a full-time instructional technology specialist who will consult one-on-one with faculty using the multimedia development center. Center multimedia services will include production of original video through the Television Services unit, digitization of video, production of CD-ROM's, and addition of animation, video, sound and graphics to multimedia projects.

Summary

Although the Instructional Technology Support Center has been in existence for less than two years, considerable progress has been made toward meeting its primary goals. Through its component units and facilities - - Media Services, Engineering and Technical Services, the center's computer classrooms, and the faculty multimedia development center - - the ITSC strives to meet the instructional technology needs of K-12 teachers and MTSU faculty.